

What is claimed is:

1. A transplantable composition comprising isolated skeletal myoblast cells and isolated fibroblast cells.
2. The composition of claim 1, wherein the cells are autologous cells.
- 5 3. The composition of claim 1, comprising from about 20% to about 70% skeletal myoblast cells.
4. The composition of claim 1, comprising about 50% skeletal myoblast cells.
5. The composition of claim 1, wherein the composition is cultured *in vitro* prior to transplantation.
- 10 6. The composition of claim 5, wherein the composition is cultured on a surface coated with poly L lysine and laminin in a medium comprising EGF.
7. The composition of claim 5, wherein the composition is cultured on a surface coated with collagen in a medium comprising FGF.
- 15 8. The composition of claim 1, wherein the composition is cultured *in vitro* a maximum of about 14 days.
9. The composition of claim 8, wherein the composition is cultured *in vitro* a maximum of about 7 days.
10. The composition of claim 5, wherein the cells are permitted to double about one time *in vitro* prior to transplantation.
- 20 11. The composition of claim 10, wherein the cells are permitted to double about 10 times *in vitro* prior to transplantation.
12. The composition of claim 11, wherein the cells are permitted to double less than about 10 times *in vitro* prior to transplantation.
- 25 13. The composition of claim 12, wherein the cells are permitted to double about 5 times *in vitro* prior to transplantation.

48

*Sub A*

14. The composition of claim 1, wherein the composition engrafts into cardiac tissue after transplantation into a subject.

15. The composition of claim 14, wherein angiogenesis is promoted in the cardiac tissue of the subject.

5 16. The composition of claim 14, wherein the composition comprises an angiogenic compound or cells engineered to express an angiogenic gene product.

17. The composition of claim 1, wherein the skeletal myoblast cells are induced to become more like cardiac cells.

*Sub A*

18. The composition of claim 17, wherein the skeletal myoblast cells are engineered to express a GATA transcription factor.

19. The composition of claim 18, wherein the GATA transcription factor is GATA4 or GATA6.

20. The composition of claim 1, wherein an antigen on the surface of a cell in the composition is modified, masked, or eliminated such that upon transplantation of the composition into a subject lysis of the cell is inhibited.

15 21. The composition of claim 20, wherein the antigen is masked with an antibody or a fragment or derivative thereof that binds to the antigen.

22. The composition of claim 21, wherein the antibody is a monoclonal antibody.

23. The composition of claim 21, wherein the antibody is an anti-MHC class I antibody.

20 24. The composition of claim 21, wherein the antibody fragment is an anti-MHC class I antibody fragment.

25. The composition of claim 24, wherein the anti-MHC class I antibody fragment is a F(ab')<sub>2</sub> fragment.

26. The composition of claim 21, wherein the antibody is PT85 or W6/32.

27. The composition of claim 21, wherein the antibody fragment is a fragment of PT85 or W6/32.

28. A method for preparing a transplantable composition comprising skeletal myoblast cells and fibroblast cells comprising culturing the composition on a surface coated with poly-L-lysine and laminin in a medium comprising EGF such that the transplantable composition is prepared.

29. The method of claim 28, wherein the cells are cultured for a maximum of about 14 days.

30. The method of claim 28, wherein the cells are permitted to double about 10 times such that the fibroblast to myoblast ratio is approximately 1:2 to 1:1.

31. A method for treating a condition in a subject characterized by damage to cardiac tissue comprising administering the composition of claim 1 into the subject such that the condition is thereby treated.

32. The method of claim 31, wherein the composition is transplanted by direct injection into the damaged cardiac tissue.

33. The method of claim 32, wherein a catheter is used to inject the composition.

34. The method of claim 31, wherein the damage to the cardiac tissue is an infarction or cardiomyopathy.

35. The method of claim 32, wherein the cardiac damage is located in a ventricle wall.

36. The method of claim 34, wherein the cardiac damage is located in the left ventricle wall.

37. The method of claim 31, wherein the composition comprises autologous cells.

38. The method of claim 31, wherein the composition is transplanted into a coronary vessel of the subject.

39. A method for promoting a cardiac cell phenotype in a skeletal myoblast comprising recombinantly expressing a cardiac cell gene product in the myoblast so that the cardiac cell phenotype is promoted.

40. The method of claim 39, wherein the gene product is a GATA transcription factor.

5 41. The method of claim 40, wherein the GATA transcription factor is GATA4 or GATA6.

42. A method for treating myocardial ischemic damage to cardiac tissue in a subject comprising administering the composition of claim 1 into the subject in an amount sufficient to treat the myocardial ischemic damage.

App'd  
C1